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ABSTRACT

Seven commercially available work evaluation systems are compared using a standardized outline: development, organization, work evaluation process, administration, scoring and norms, observation of clients, reporting utility, training in the system, technical considerations, reviewer's summary and comments, address, cost, and references. There are four sections: (1) a brief paper listing factors to be considered in selecting a commercial evaluation battery for such tools as on-the-job evaluations, sheltered employment, work samples, and psychological tests for assessing clients' potential; (2) an explanation of the fourteen major points (criteria) in the outline; (3) a table presenting brief comparison of the seven systems on the first ten points (points 11-14 not appropriate to summarized; and (4) more detailed description of each system including reviewer's comments, address, cost, and references. The seven systems covered are McCarron-Dial Work Evaluation System, Philadelphia Jewish Employment and Vocational Service (JEVS), Singer Vocational Evaluation System, Talent Assessment Programs (TAP), The Tower System, Valpar Component Work Sample Series, and Wide Range Employment Sample Test (WREST). Four more recently developed systems are compared in a separate document (see Note). (JT)

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A Comparison of Seven Vocational Evaluation Systems

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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INTRODUCTION

In December, 1971, Dr. Dennis Dunn published a "Comparison of the JEVS, Singer/Graflex and TOWER Work Evaluation Systems." This article, reprinted by the Materials Development Center as Reprint Series No. 5, has been disseminated to thousands of individuals since its initial publication. Since 1971, new commercial work evaluation systems have been revised and expanded, making the original comparison by Dr. Dunn out of date. This publication is a revision and an expansion of Dr. Dunn's original work; it compares seven commercially available work evaluation systems (i.e. JEVS, McCarron-Dial, Singer, TAP, TOWER, VALPAR and WREST) using a standardized outline based on the Dunn publication and the MDC sound/slide Orientation to Work Sample Batteries Series.

The purpose of this publication is to present a reasonably objective comparison of the seven systems. In preparing this comparison, manuals, technical reports and related publications were used to obtain information about each system. It is hoped that this publication will be used as a guide for potential purchasers so that they can examine each system in light of their own needs. Facilities considering the purchase of any system should not only talk with vocational evaluators in facilities who are using a system, but should also see the system in action prior to making a final decision.

This publication contains four sections. The first is a brief paper on how to select a commercial vocational evaluation system. The second is an explanation of the 14 major points contained in the outline. The third section is a table which presents a very brief comparison of the seven systems on the first ten points in the outline (Points 11 through 14 are not presented because of redundancy or not being appropriate to summarize). The fourth section contains a more detailed description of each vocational evaluation system, including reviewer's comments, address, cost and references.

Two final comments are necessary. First, most of these systems are constantly being revised, expanded and updated. Second, for those who desire additional information, the Materials Development Center has a sound-slide presentation on each of the seven vocational evaluation systems described in this publication.

Karl F. Botterbusch, Ph.D.
February, 1976

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TABLE OF CONTENTS

	Page
Some Considerations for Selection of a Commercial Vocational Evaluation System	1
Vocational Evaluation System Outline	5
Table Comparing Seven Vocational Evaluation Systems	8
Detailed Description of Vocational Evaluation Systems	
1. McCarron-Dial Work Evaluation System	15
2. Philadelphia Jewish Employment and Vocational Service	19
3. Singer Vocational Evaluation System	24
4. Talent Assessment Programs	28
5. The Tower System	32
6. Valpar Component Work Sample Series	39
7. Wide Range Employment Sample Test	43

Some Considerations for Selection of a Commercial Vocational Evaluation System

Over the years many people have contacted the MDC for advice concerning the most appropriate vocational evaluation system to purchase for their facility. This section was prepared in response to these requests and will outline some of the factors to be considered prior to purchasing a commercial vocational evaluation system. The evaluator has at his disposal many tools for assessing client potential*:

1. On-the-Job Evaluations - These are situations in which the client is assessed in one or more of a variety of real work situations including: job site situations in industry, production work situation in sheltered employment, trial training evaluation in a training program and simulated job stations within the facility.

2. Work Samples - There are four types of work samples according to their degree of correspondence with actual jobs: actual job samples, simulated job samples, cluster trait samples and single trait samples.

3. Psychological Tests - These include an almost endless variety of paper-and-pencil and apparatus techniques for measuring traits, abilities, etc.

Faced with the need to equip and administer a vocational evaluation unit, many untrained and inexperienced evaluators feel that the purchase of a commercial evaluation battery will solve their problems. The evaluator should analyze a number of factors in deciding the equipping of the evaluation unit and then carefully investigate all the tools listed above to determine the ones that will provide him with the best methods to adequately assess his clients.

The first area of consideration is the relationship between the community and the vocational evaluation unit. The evaluator must carefully investigate the range and type of jobs that are available in the local labor market. (Thus, a small rural facility or a facility in a one industry area will most likely have a narrower range of job evaluation stations than a facility in an urban area.) Labor market information can be obtained through vocational surveys, local employment offices and agencies, and client placement records. Once potential employment opportunities have been determined, intelligent decisions can be made on what type of evaluation tools can best assess these demands.

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*A detailed discussion of these techniques is found in: Task Force No. 2, The tools of vocational evaluation, Vocational Evaluation and Work Adjustment Bulletin, 1975, Vol. 8, Part I, special edition, 49-64. (The three publications of the VEWAA Research Project have been reprinted in one volume (Reprint No. 12) by MDC. Price $2.00.)

Because the evaluation outcomes may not result in immediate placement, it is also necessary to investigate the training opportunities available for clients and these should also be reflected in the selection of evaluation tools. A client's range of occupations widens and his chances for upward mobility are frequently increased as a result of training. The presence of an area vocational-technical school, private trade and business schools, on-the-job training programs, apprenticeship programs and even higher education should be reflected in the evaluation unit. Vocational evaluation techniques covering a wide variety of occupational areas and assessing the full range of client aptitudes and interests are needed if the facility is in an area where many employment and training opportunities are available.

The second consideration is the client population. Some evaluation units must be capable of serving clients with all types of mental, physical, psychological, and cultural disabilities. Other facilities restrict themselves to serving either a single disability or a small number of disabilities. A facility dealing with many types of handicaps would generally need to have techniques covering the entire range of occupational areas and skill levels within these areas. A facility providing services to a single disability group could safely limit their evaluation areas. For example, a facility serving only mentally retarded clients could realistically avoid evaluation for occupations that require a great deal of formalized training or higher education. Some systems claim to have been designed specifically for a particular level of client functioning. When selecting evaluation tools, remember the type of clients you serve--it would be a waste of time to assess a client for a job he could not fill because of his handicap. Also, at present all commercial vocational evaluation systems are designed for persons who can see and hear and contain no special instructions or modifications for the blind or deaf. The evaluator should be aware that he frequently will have to make modifications in the work samples so that they meet the special needs of his clients. In summary, if you are considering a commercial evaluation battery, check the battery against the needs of your client population and then decide: (1) if the system is designed for your disability group(s), or (2) if other evaluation techniques would be more appropriate.

The third area is the purpose of evaluation. Although all vocational evaluation techniques should provide career information, a particular technique may either emphasize occupational information by providing a hands-on experience or it may emphasize the assessment of present skills and aptitudes without relating it to career information. Some systems attempt to provide a thorough evaluation of the client's aptitudes and work behaviors; others provide occupational information and experience, often at the expense of a thorough ability assessment. The evaluator should check the final report format to determine exactly what information it contains; this goes a long way in determining the purpose of a particular system. The evaluator must first decide the needs in these areas and then attempt to find or develop the evaluation tools that best fit the client's needs. A system should never be purchased to "fit in somewhere."

The fourth area of concern is perhaps the most basic--why even purchase a commercial evaluation system at all? All of the systems are relatively expensive; some are very expensive. None will probably meet the individual needs of a facility in terms of community jobs and training, client populations, and purpose of evaluation. A facility could develop its own evaluation unit based on job or work samples taken from local industry. This would make evaluation very realistic for the client, staff and even for a potential employer. Additional work samples could be developed from existing subcontracts in the workshop. This method not only will assess the areas in which the client has his maximum functions and interests, but also the areas of the shop that would best fit the client. In addition, the client would receive training on the work performed in the workshop. Then, when the client is transferred from the evaluation unit, he or she will be familiar with the subcontract, which should alleviate the need for the supervisor to train the client from "scratch."

The development of a work sample is expensive in terms of staff time. In most facilities staff is hired to provide direct client service, and to have a staff person doing developmental work reduces the time available for working with clients. Few evaluation units can afford the luxury of developmental time for staff persons*. Besides the time element, development of evaluation tools demands a working knowledge of skills in the areas of job and task analysis, form and report design, behavior analysis, statistics for norms, industrial engineering techniques, etc. Although these skills are becoming more and more widespread among evaluators, there are still many facilities that lack persons with these competencies. The lack of developmental time coupled with the inexperience of some evaluators is partly responsible for the increased use of commercial evaluation systems. The purchase of these systems as a matter of convenience does not necessarily imply that the systems are not useful to the evaluator.

The first decision is whether the evaluation unit is meeting client needs in terms of accurate assessment for available jobs and/or training. If needs are not being met, the second decision becomes a question of what areas of job assessment are needed for the evaluation unit. After these needs are known, a thorough review of the different evaluation techniques, commercial vocational evaluation batteries (or parts of these batteries) and other available resources is made to determine how to best meet these needs. There is a common practice for many persons to want to buy a system that will give <u>all</u> the answers. This simply does not exist. There is also the possibility of carefully selecting individual work samples from several systems and combining these into a unified system specific to the needs of the facility. To have appropriate evaluation stations, there has to be a great deal of analysis of what is to be accomplished during evaluation, the available jobs and training, the types of clients with whom you are working and the best way to accomplish

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*The MDC Work Sample Manual Clearinghouse is attempting to reduce the developmental time by making completed work sample manuals available to evaluators.

the goals of your facility. This analysis is absolutely necessary before you can develop any system.

The preceding points can only be used as general guidelines because each facility is unique. A critical factor in purchasing a system should be based on the knowledge of what is needed and not on the cost or attractiveness of the hardware. Usually no one system will meet all the needs of a facility and the purchased system should be integrated with facility constructed devices, other evaluation systems, on-the-job evaluation, and psychological tests. MDC suggests that a facility obtain as much accurate information as possible about a system prior to purchase. Some sources of information are:

1. The information contained in this publication.

2. MDC has a sound-slide presentation on each evaluation system described in this publication. View the presentations on the system(s) you are considering.

3. Talk with evaluators in other facilities who are using the system you have in mind and see what they think of it.

4. If possible, try out the system yourself with clients in another facility.

5. Write the system's manufacturer and obtain current information.

In conclusion, MDC cannot recommend what system(s) will be best for your facility because selecting the appropriate system is (or should be) based on an accurate, realistic assessment of the unique needs of each facility.

Karl F. Botterbusch, Ph.D.
Arnold B. Sax, Ed.D.

VOCATIONAL EVALUATION SYSTEM OUTLINE

1. Development

   a. Sponsor - The name of the organization who originally funded or financed the development of the vocational evaluation system.

   b. Target Group - What specific populations, such as disadvantaged, mentally retarded, or physically handicapped, was the system designed to serve?

   c. Basis of the System - What theoretical or organizational principle, such as the Dictionary of Occupational Titles, was used as a basis for development?

2. Organization

   a. Name and Number of Work Samples - What are the names of the work samples and how many work samples does the system contain?

   b. Grouping of Work Samples - What is the arrangement of the individual work samples within the system? Are several work samples grouped in a hierarchy or is each work sample independent?

   c. Packaging of Work Samples - What is the physical set-up of the work samples in the battery?

   d. Manual - What is the physical description of the manual and does it provide all the details that the evaluator needs to know in order to use the system?

3. Work Evaluation Process

   a. Preliminary Screening - What information is needed or what decisions must be made before a client can be administered the system?

   b. Sequence of Work Sample Administration - In what order are the work samples administered?

   c. Client Involvement - To what extent is the client informed of his/her progress during the course of administration? What type of formal feedback is given to the client after the entire battery has been administered? What type of contact does the client have with the evaluator?

   d. Evaluation Setting - Does the general environment attempt to simulate industry, produce a classroom atmosphere, or resemble a formal testing situation?

   e. Time to Complete the Entire System - How long does it take the average client to complete all the work samples in the system?

4. Administration

   a. Procedures - Are the purpose of each work sample, materials needed, layout, and general instructions clearly given so that there is little chance of misinterpretation?

b. Method of Instruction Giving - How does the client receive his/her instructions for the work samples in the system, for example: oral, demonstration, written instructions, or audio-visual?

c. Repeating Work Samples - What provisions are made for the readministration of some work samples and what is the purpose of readministration?

d. Providing Assistance to the Client - What procedures are there for giving extra or additional instructions, demonstrations or feedback after the period of initial instructions?

5. Scoring and Norms

a. Timing - What are the procedures for timing the client?

b. Timing Interval - When does the evaluator start timing the client and when does he stop?

c. Time Norms - What is the procedure for reporting the time score for each work sample?

d. Error Scoring - What procedures, such as a random check of some parts, general rating of overall quality, or a comparison to standards, are used for determining errors?

e. Scoring Aids - What use is made of overlays, templates, models, etc., to make scoring more accurate and easier for the evaluator?

f. Quality Norms - What procedures are used for reporting the number of errors, quality rating, etc., for each work sample?

g. Emphasis in Scoring - Does the system emphasize time or errors in the scoring process?

6. Observation of Clients

a. Work Performance - Are work performance factors (e.g., fine finger dexterity, color perception) listed for the system and are specific work performance factors given for each work sample?

b. Work Behaviors - Are work behaviors (e.g., ability to follow instructions, communication with supervisors) defined for the system and are specific work behaviors to be observed for each work sample?

c. Rating System - What procedures does the system have for the recording, describing, and rating of observed work performance and work behaviors?

d. Frequency of Observation - How often and to what extent is the evaluator to observe and record client behavior?

7. Reporting

a. Forms - What forms are included with the system?

b. Final Report Format - What information is included in the final report and what type of format (e.g., rating scales, free narration) is used to present the information?

8. Utility

a. Vocational Exploration - Does the system provide experiences that the client can readily relate to real jobs?

b. Vocational Recommendations - Are training and job recommendations specific or general? How are they related to the DOT or other job classification systems?

c. Counselor Utilization - Can the system provide the counselor or referring agency with useful information and to what extent is the counselor involved in the process?

9. Training in the System

a. Training Required - Is formal training required before the system is sold?

b. Training Available - Is formal training available?

c. Duration - How much time is required for training?

d. Follow-up - Is technical assistance available after purchase and training?

10. Technical Considerations

a. Norm Base - What norms are available and are the norm groups clearly defined? Are industrial norms (i.e., employed worker) available?

b. Reliability - What empirical evidence is there to demonstrate that the system gives reliable or consistent results?

c. Validity - What empirical evidence is available to indicate that the system really does what it claims, such as make more realistic choices, job and training success, etc.?

11. Reviewer's Summary and Comments - This contains what the reviewer considers to be the major advantages and disadvantages of the system.

12. Address - The address of the manufacturer is given for those wishing to obtain additional information.

13. Cost - The present cost of the system and what materials and services are included in the price.

14. References - All generally available references are given; those not available from the MDC Loan Service are indicated by an asterisk (*).

Outline	McCarron-Dial	JEVS	Singer
1. Development			
a. Sponsor	McCarron and Dial	U.S. Department of Labor	Singer Education Division
b. Target Group	mentally retarded and mentally ill	disadvantaged	not specified
c. Basis of System	5 neuropsychological factors	DOT	not specified
2. Organization			
a. Number of Work Samples	17	28	20
b. Grouping of Work Samples	grouped into 5 factors	10 Worker Trait Groups	each work sample is independent
c. Packaging of Work Samples	some individually packaged	all individually packaged	self-contained in carrel
d. Manual	offset; contains all details	offset; contains all details	printed; some details not provided
3. Work Evaluation Process			
a. Preliminary Screening	client interview	not required	not required
b. Sequence of Administration	in order by factors	progressive from easiest to hardest	discretion of evaluator
c. Client Involvement	encouraged	little client involvement	extensive client involvement
d. Evaluation Setting	formal testing and workshop	realistic work setting stressed	not specified
e. Time to Complete Entire System	2 weeks	6 - 7 days	estimate over 3 weeks
4. Administration			
a. Procedures	specified in detail	specified in detail	general procedures described
b. Method of Instruction Giving	oral and demonstration	most oral and demonstration	audio-visual
c. Repeating Work Samples	factor 3 repeated if necessary	not recommended	repeated if desired by evaluator
d. Providing Assistance to Client	little assistance provided	assistance lowers score	checkpoints built in

TAP	TOWER	VALPAR	WREST
Talent Assessment Programs	Vocational Rehabilitation Administration	Valpar Corporation	Guidance Associates of Delaware, Inc.
not specified	physically and emotionally disabled	industrially injured workers	not specified
occupational clusters	job analysis	trait and factor	not specified
11	93	12	10
each work sample is independent	14 training areas	each work sample is independent; not grouped	each work sample is independent
all individually packaged	not individually packaged	all individually packaged	not individually packaged
offset; some details not provided	printed; some details not provided	individual manual for each work sample; offset, contains all details	printed; contains all details
not specified	emphasized for planning	not required	not specified
8 of the work samples given in any order	progressive within areas	discretion of evaluator	in order by number
not specified	not specified	not specified	not specified
not specified	realistic work setting stressed	not specified	not specified
2 1/2 hours	3 weeks	estimate 12-15 hours	1 1/2 hours
not specified in detail	specified in detail, except layout	specified in detail	specified in detail; can be group administered
oral and demonstration	written instructions	oral and demonstration	oral and demonstration
not specified	encouraged for upgrading	encouraged for upgrading	emphasized for upgrading
little assistance provided	not specified	not specified	not specified

Outline	McCarron-Dial	JEVS	Singer
5. Scoring and Norms			
a. Timing	evaluator times client	client uses time clock	evaluator times client
b. Timing interval	few tasks are timed	from end of instructions to completion of task	varies with each work sample
c. Time Norms	no separate time norms	rated on 3-point scale	rated on 5-point scale
d. Error Scoring	compared to standards	compared to standards	compared to standards
e. Scoring Aids	not used	minimal use	some use
f. Quality Norms	combined with time norms for overall score	most rated on 3-point scale	rated on 5-point scale
g. Emphasis in Scoring	quality	time and quality given equal weight	quality
6. Observation of Clients			
a. Work Performance	some factors identified	25 factors specified	29 factors defined
b. Work Behaviors	clearly defined	clearly defined	clearly defined
c. Rating System	3 separate instruments used	3-point rating scale	general rating on 5-point scale for each work sample
d. Frequency of Observation	not specified	extensive observations	very frequent
7. Reporting			
a. Forms	standardized forms for all phases	standardized forms for all phases	standardized forms for all phases
b. Final Report Format	profile of results and recommendations	standardized format; recommended Work Trait Groups	narrative
8. Utility			
a. Vocational Exploration	little use to client	limited use	extensive occupational information given to client
b. Vocational Recommendations	one of 5 program areas are recommended	highly related to DOT	emphasis on orientation to training
c. Counselor Utilization	disability determination	orientated toward counselor	orientated toward counselor

TAP	TOWER	VALPAR	WREST
evaluator times client from end of instructions to completion of task actual time recorded not clearly defined not used combined with time norms for overall score time	evaluator times client from end of instructions to completion of task rated on 5-point scale compared to standards extensive use rated on 5-point scale time and quality given equal weight	evaluator times client from end of instructions to completion of task actual time recorded compared to standards some use time and error combined for performance norms time and quality given equal weight	evaluator times client usually from end of instructions to completion of task actual time recorded compared to standards not used all errors totaled for single quality score time
no factors defined no behaviors defined no rating method used not specified	few factors specified not specifically defined 5-point rating scale used not emphasized	no factors defined 17 factors defined 5-point rating scale used not specified	no factors defined no behaviors defined no rating method used not specified
standardized forms for all phases profile of results and narrative report	standardized forms for all phases narrative using standardized outline and ratings	standardized forms for recording performance not used; independent work samples	standardized form for recording performance not specified
limited use related to specific jobs orientated toward counselor	exposure to a variety of work areas limited to jobs related to work areas orientated toward counselor	limited use limited use not specified	limited use not specified not specified

Outline	McCarron-Dial	JEVS	Singer
9. Training in the System			
a. Training Required	Yes	Yes	No
b. Training Available	Yes	Yes	Yes
c. Duration	1 to 2 weeks	2 weeks	2 weeks
d. Follow up	No	Yes	No
10. Technical Considerations			
a. Norm Base	200 clients	322 clients	"more than 100 individuals"
b. Reliability	no data available	no data available	no data available
c. Validity	procedures not adequate to draw conclusions	published results favorable	no data available

TAP	TOWER	VALPAR	WREST
Yes	Yes	No	No
Yes	Yes	Yes	No
1 1/2 days	3 weeks	Up to 10 days	not applicable
not specified	No	as needed	No
7 different norm groups	clients	clients and workers	different age groups and employed workers
.85 coefficient of stability	no data available	test-retest with fairly high estimates	test-retest and internal consistency estimates given
no data available	equivocal results	no data available	no data available

McCARRON-DIAL WORK EVALUATION SYSTEM

(McCarron-Dial)

1. Development

   a. Sponsor - Lawrence T. McCarron and Jack G. Dial.

   b. Target Group - The mentally retarded and chronically mentally ill.

   c. Basis of System - The system is based on five neuropsychological factors (see below).

2. Organization

   a. Name and Number of Work Samples - The McCarron-Dial contains 17 separate instruments, grouped into five factors:

      (1) Verbal-Cognitive - Wechseler Adult Intelligence Scale (or Stanford-Binet Intelligence Scale) and the Peabody Picture Vocabulary Test.
      (2) Sensory - Bender Visual Motor Gestalt Test and Haptic Visual Discrimination Test.
      (3) Motor Abilities -
         (a) Fine Motor Skills Assessment: Beads-in-Box; Beads-on-Rod; Finger Tapping; Nut-and-Bolt Task; and Rod Slide.
         (b) Gross Motor Skills Assessment: Hand Strength; Finger-Nose-Finger Movement; Jumping; Heel-Toe Tandem Walk; and Standing on one Foot.
      (4) Emotional - Observational Emotional Inventory
      (5) Integration-Coping - San Francisco Vocational Competency Scale and Dial Behavioral Rating Scale.

   b. Grouping of Work Samples - The tests, tasks, and scales are grouped according to five factors; all devices are closely interrelated.

   c. Packaging of Work Samples - The tasks for the Motor Abilities Factor, the Observational Emotional Inventory, the Dial Behavioral Rating Scale, the Peabody Picture Vocabulary Test, Bender Visual Motor Gestalt and the Haptic Visual Discrimination Test are packaged independently. The WAIS and the Stanford-Binet must be purchased from their appropriate publishers.

   d. Manual - The bound offset manual contains all system details.

3. Work Evaluation Process

   a. Preliminary Screening - An interview with the client and the referral source is urged to obtain background data on the client.

   b. Sequence of Work Sample Administration - Administration begins with factor one and continues through factor five.

c. Client Involvement - Client involvement is encouraged during the assessment period. Upon completion, the manual recommends individual counseling to provide help for the client to move toward realistic work-training goals and expectations.

d. Evaluation Setting - A formal testing setting is used for factors one through three; the other two factors require a period of placement in a work setting, most commonly a sheltered workshop.

e. Time to Complete the Entire System - The first three factors can be assessed in one day; two weeks of systematic observation in a work setting are needed to assess for the emotional and integration-coping factors.

4. Administration

a. Procedures - Instructions, materials needed, layout and scoring procedures are all specified in detail. Standardized tests are administered according to instructions in their test manuals.

b. Method of Instruction Giving - All instructions for factor three are given orally and are accompanied by demonstration if needed. Factors one and two are given according to their test manual instructions.

c. Repeating Work Samples - Factor three assessments may be repeated if the evaluator questions the validity of the results.

d. Providing Assistance to the Client - Evaluator is to make certain that the client fully understands the instructions of each task; no assistance is given during formal testing (i.e., the first two factors).

5. Scoring and Norms

a. Timing - The evaluator times the client.

b. Timing Interval - Few tasks are timed; those that are timed involve counting the number of responses or accurate observation for a specified number of seconds.

c. Time Norms - No separate time norms are presented; time and quality norms are combined and presented in the form of a single raw score for each major task area. These scores are converted to percentile and plotted on a profile sheet.

d. Error Scoring - The quality of performance is compared to a well defined set of standards.

e. Scoring Aids - No scoring aids are used.

f. Quality Norms - See "c. Time Norms" above.

g. Emphasis in Scoring - The system emphasizes the quality of performance.

6. Observation of Clients

   a. Work Performance - Some work performance factors are identified on the various rating scales.

   b. Work Behaviors - Work behaviors, as well as personal behaviors, are clearly specified and many specific work behaviors are listed. Most behaviors are defined in observable behavioral terms.

   c. Rating System - The Observational Emotional Inventory, San Francisco Vocational Scale, and the Dial Behavioral Rating Scale all use a five-point scale to rate behaviors and performance factors; each form has its own system of combining the individual ratings to form different scales.

   d. Frequency of Observation - Not specified

7. Reporting

   a. Forms - Standardized forms are included for the assessment of many of the motor tasks, behavioral observations, summary forms, and a profile.

   b. Final Report Format - The standard format includes a profile of all results together with recommendations for appropriate training and/or work potential. A narrative summary of the results for each of the five factors is also presented.

8. Utility

   a. Vocational Exploration - The formalized assessment procedures required for the first three factors offer almost no chance for client vocational exploration. The observation period either in the sheltered workshop or on a job site could provide chances for exploration, but this depends on the program of each facility.

   b. Vocational Recommendations - The system attempts to assess the client's ability to function in one of the five following program areas: day care, work activities, extended sheltered employment, transitional sheltered employment, and community employment. Examples of final reports are provided to show integration of results. Emphasis is on training and placement; no relationship to DOT.

   c. Counselor Utilization - The system is designed for disability determination and is aimed toward the counselor; counselor involvement is recommended.

9. Training in the System

   a. Training Required - Yes

   b. Training Available - Yes

   c. Duration - One to two weeks contingent on the evaluator's experience.

   d. Follow-up - No

10. Technical Considerations

a. Norm Base - Norms are available on 200 adult "mentally disabled individuals" in sheltered and community employment; some characteristics of the norm group are not given. No industrial norms are available.

b. Reliability - No data available

c. Validity - Although some regression equations are presented in the manual, technical information is not explained in sufficient detail to permit the reader to judge these research results. A thesis by Packard (1975) reports positive results.

11. Reviewer's Summary and Comments - The McCarron-Dial was designed for the purpose of assessing the mentally disabled person's ability to function. It uses a combination of widely accepted individually administered psychological tests, assessments of fine and gross motor ability, and an extended period of observation. Rather than discard those tests which have proven useful, or to rely solely on performance and behavior observation, the McCarron-Dial attempts to combine them into a single prediction tool. The major problem appears to be that no clear cutoffs or guidelines for making cutoffs are made between the five program areas.

12. Address

Commercial Marketing Enterprises
Department: MDWES
11300 North Central, Suite 105
Dallas, Texas 75231

13. Cost - $323.75 for entire system except WAIS and Stanford-Binet; $140.00 for 100 copies of all forms. Add 10% for shipping and handling.

14. References

*McCarron, L. T., & Dial, J. G., Neuropsychological predictions of sheltered workshop performance. American Journal of Mental Deficiency, 1972, 77, 244-250.

Packard, R. A., A pre-admission screening battery: A concurrent validation of the McCarron-Dial Work Evaluation System. Unpublished masters thesis, University of Texas, Health Science Center, Dallas, Texas, 1975.

Timmerman, W. J., & Doctor, A. C., Special applications of work evaluation techniques for prediction of employability of the trainable mentally retarded. Stryker, Ohio: Quadco Rehabilitation Center, Inc., 1974.

PHILADELPHIA JEWISH EMPLOYMENT AND VOCATIONAL SERVICE

WORK SAMPLE SYSTEM (JEVS)

1. Development

   a. Sponsor - U.S. Department of Labor

   b. Target Group - Originally designed for the disadvantaged, the system is now being adapted for the disabled.

   c. Basis of System - The Worker Trait Group Organization of The Dictionary of Occupational Titles (DOT).

2. Organization

   a. Name and Number of Work Samples - The system contains 28 work samples arranged in ten Worker Trait Groups as follows:

      (1) Handling - Nut, Bolt and Washer Assembly; Rubber Stamping; Washer Threading; Budgette Assembly; and Sign Making.
      (2) Sorting, Inspecting, Measuring and Related Work - Tile Sorting; Nut Packing; and Collating Leather Samples.
      (3) Tending - Grommet Assembly.
      (4) Manipulating - Union Assembly; Belt Assembly; Ladder Assembly; Metal Square Fabrication; Hardware Assembly; Telephone Assembly; and Lock Assembly.
      (5) Routine Checking and Recording - Filing by Number; and Proofreading.
      (6) Classifying, Filing, and Related Work - Filing by Three Letters; Nail and Screw Sorting; Adding Machine; Payroll Computation; and Computing Postage.
      (7) Inspecting and Stock Checking - Resistor Reading.
      (8) Craftsmanship and Related Work - Pipe Assembly.
      (9) Costuming, Tailoring, and Dressmaking - Blouse Making and Vest Making.
      (10) Drafting and Related Work - Condensing Principle.

   b. Grouping of Samples - The work samples are grouped into ten Worker Trait Groups.

   c. Packaging of Work Samples - Each work sample is individually packaged.

   d. Manual - The offset manual with photographs contains complete system details.

3. Work Evaluation Process

   a. Preliminary Screening - Not required

   b. Sequence of Work Sample Administration - Work samples are administered progressively with the client starting with the simplest work sample and proceeding in order through the system.

c. Client Involvement - Because work sample administration resembles a formal testing situation, client contact with the evaluator is minimized; feedback on performance and behavior occurs at the end of the evaluation process.

d. Evaluation Setting - A realistic work atmosphere and setting are stressed in the manual.

e. Time to Complete the Entire System - The average client takes six or seven days.

4. Administration

a. Procedures - The material required and layout are clearly described; photographs are used to insure proper layout.

b. Method of Instruction Giving - Most instructions are oral and demonstration; written instructions are used only when reading is a requirement in a job area being sampled.

c. Repeating Work Samples - Readministration is not recommended because it invalidates results.

d. Providing Assistance to Clients - Assistance can be given after the initial instruction period; but this results in lowering the client's final score.

5. Scoring and Norms

a. Timing - The client uses a time clock for each work sample.

b. Timing Interval - The evaluator punches the time clock after instructions are given, and the client punches the clock when the work sample is completed.

c. Time Norms - Time results are rated on a three-point scale based on the number of minutes to completion.

d. Error Scoring - Most work samples use a random check of items which are compared to carefully defined scoring criteria; some use photographs to illustrate quality standards.

e. Scoring Aids - Minimal use is made of scoring aids.

f. Quality Norms - Most work samples use a three-point rating scale based on the number of counted errors; others use a correct-incorrect dichotomy.

g. Emphasis in Scoring - Time and quality are given equal weight.

6. Observation of Clients

a. Work Performance - Twenty-five work factors are specified for the system; each work sample has certain factors listed that are to be observed.

b. Work Behaviors - All work behaviors to be observed are carefully defined.

c. Rating System - Many of the 25 work performance factors are rated on a three-point scale, with all ratings clearly defined and illustrated.

d. Frequency of Observation - The system uses extensive observations. Observation of defined work factors is required for each work sample; these are summarized daily.

7. Reporting

a. Forms - Standardized forms are included for work sample recording, daily observational summary, feedback interview and final report.

b. Final Report Format - The standardized format includes the ranking of work sample performance, recommended Worker Trait Groups and rationale, and extensive written comments on performance and behavior.

8. Utility

a. Vocational Exploration - There is limited opportunity because many of the work samples tend to be abstract.

b. Vocational Recommendations - Vocational recommendations are highly related to the DOT, cover a wide range of jobs, and are geared for both training and job placement.

c. Counselor Utilization - The system and the final report are orientated toward the counselor; however, counselor familiarity with the DOT is necessary for optimal counselor use.

9. Training Required

a. Training Required - Yes

b. Training Available - Yes

c. Duration - Two weeks

d. Follow-up - Two technical assistance visits are made to assist with the establishment of the system and the maintenance of standardized procedures.

10. Technical Considerations

a. Norm Base - The system was normed on 322 clients, mainly young black males; the sample is clearly described. No industrial norms are available.

b. Reliability - No published data available

c. Validity - Although the initial study of the system gave favorable evidence, results of studies done by the U.S. Department of Labor have not been released to the public. Research by Nadolsky (1973) concludes that the system is valid for evaluation of immediate employment potential.

11. Reviewer's Summary and Comments - The JEVS system is a highly standardized and well integrated procedure for client evaluation based on ten of the DOT Worker Trait Groups. The system emphasizes the accurate observation and recording of work behaviors and performance factors. The major problems with the system appear to be the abstract nature of many of the work samples, which hinders vocational exploration, limited evaluation feedback to the client, and the lack of job information presented to the client. The system is perhaps best used when a thorough evaluation of the client's potential is desired.

12. Address

Vocational Research Institute
Jewish Employment and Vocational Service
1913 Walnut Street
Philadelphia, Pennsylvania 19103

13. Cost - $6,140.00 includes all work samples and forms, shipping, tuition for training one person in Philadelphia and two site visits (transportation of JEVS Staff person not included).

14. References

American Vocational Association. Manpower, human assessment and the disadvantaged: A consumer report on the use and misuse of standardized testing. American Vocational Journal, 1973, 48 (1), 85-100.

Backer, T., Methods of assessing the disadvantaged in manpower programs: A review and analysis. Los Angeles: Human Interaction Research Institute, 1972.

Drachman, F., & Kulman, H., New developments in the Philadelphia JEVS Work Sample System. Vocational Evaluation and Work Adjustment Bulletin, 1973, 6 (1), 21-24.

Flenniken, D., Time-quality performance of Goodwill clients evaluated by the JEVS Work Sample Battery. Vocational Evaluation and Work Adjustment Bulletin, 1974, 7 (3), 3-16.

Gold, M., Factors affecting production by the retarded: Base rate. Mental Retardation, 1973, 11 (6), 41-45.

Jewish Employment and Vocational Service, Work samples: Signposts on the road to occupational choice. Philadelphia: Author, 1968.

*Jewish Employment and Vocational Service. The development of time and quality norms for the Philadelphia JEVS Work Sample System. Philadelphia: Author, 1973.

Kulman, H., The Jewish Employment and Vocational Service Work Sample Battery. In A. Sax (Ed.), Innovations in vocational evaluation and work adjustment. Vocational Evaluation and Work Adjustment Bulletin, 1971, 4 (1), 25-27.

McHugh, P., New approaches in work sample utilization. New York: The Experimental Manpower Laboratory at Mobilization for Youth, 1971.

Morley, R. (Ed.), Vocational assessment systems. Des Moines: State of Iowa, Department of Public Instruction, 1973.

Nadolsky, J., Vocational evaluation of the culturally disadvantaged: A comparative investigation of the JEVS system and a model-based system, final report. Auburn, Alabama: Auburn University, School of Education, Department of Vocational and Adult Education, 1973.

Orr, B., Work sample evaluation development project. Philadelphia: Jewish Employment and Vocational Service, 1972.

Plax, K. (Ed.), An evaluation of the Philadelphia JEVS Work Sample Battery. Research Bulletin, St. Louis Jewish Employment and Vocational Service, August, 1972.

Rottenstein, R., & Small, J., Midwest adaptation of the Philadelphia Work Sample System. Chicago: Jewish Vocational Service, 1973.

Spergel, P., Vocational evaluation: Research and implications for maximizing human potentials. Journal of Rehabilitation, 1970, 36 (1), 21-24.

Spergel, P., Assessment of the disadvantaged. Vocational Evaluation and Work Adjustment Bulletin, 1970, 3 (1), 8-10.

Spergel, P., & Leshner, S., Vocational assessment through work sampling. Journal of Jewish Communal Service, 1968, 44, 225-229.

SINGER VOCATIONAL EVALUATION SYSTEM

(Singer)

1. Development

   a. Sponsor - Singer Education Division

   b. Target Group - Not Specified

   c. Basis of System - Not specified

2. Organization

   a. Name and Number of Work Samples - At present the following 19 work samples are contained in the system:

      (1) Sample Making; (2) Bench Assembly; (3) Drafting; (4) Electrical Wiring; (5) Plumbing and Pipe Fitting; (6) Carpentry; (7) Refrigeration, Heating and Air Conditioning; (8) Soldering and Welding; (9) Office and Sales Clerk; (10) Needle Trades; (11) Masonry; (12) Sheet Metal; (13) Cooking and Baking; (14) Engine Service; (15) Medical Service; (16) Cosmetology; (17) Data Calculation and Recording; (18) Soil Testing; (19) Photo Lab Technician; and (20) Production Machine Operating.

   b. Grouping of Samples - Each work sample is independent.

   c. Packaging of Work Samples - Each work sample is self-contained in a carrel.

   d. Manual - The printed manual is bound in a looseleaf folder; some system details (e.g., report preparation and interpretation) are not provided.

3. Work Evaluation Process

   a. Preliminary Screening - Not required

   b. Sequence of Work Sample Administration - The order of administration is left to the discretion of the evaluator.

   c. Client Involvement - The client is extensively involved in the evaluation process through a system of self-ratings of interest and performance. Due to the frequent number of checkpoints in each work sample, client contact with evaluator is high; little provision for accurate feedback exists.

   d. Evaluation Setting - Not specified

   e. Time to Complete the Entire System - Not specified (reviewer estimates over three weeks if all 20 work samples are given)

4. Administration

   a. Procedures - The general administration procedures are described for the entire battery; the tools and supplies needed for each work sample are clearly listed.

b. Method of Instruction Giving - All instructions are given using an audio-cassette tape and film strip format, with the client controlling the rate of advancement. This programmed material is occasionally supplemented with written material.

c. Repeating Work Samples - Work samples may be repeated if desired by the evaluator.

d. Providing Assistance to the Client - The evaluator is encouraged to make sure that the client knows how to do the task before he begins to work; checkpoints are provided in the audio-visual material so that the client can ask the evaluator to review his progress before continuing.

5. Scoring and Norms

a. Timing - Evaluator times client.

b. Timing Interval - The interval varies with each work sample and is specified for each work sample in the manual.

c. Time Norms - The results are rated on a five-point scale, based on the number of minutes to completion.

d. Error Scoring - All items are checked against a carefully defined scoring criteria.

e. Scoring Aids - Some use is made of scoring aids.

f. Quality Norms - Quality norms are rated on a five-point scale, based on the actual number of errors.

g. Emphasis in Scoring - Emphasis is on the quality of the finished product.

6. Observation of Clients

a. Work Performance - Twenty-nine work factors (taken mostly from the DOT interest and temperament factors) are defined and each work sample has certain factors listed that are to be observed.

b. Work Behaviors - The work behaviors to be observed are defined.

c. Rating System - Client and evaluator both rate client's performance on a five-point scale for each work sample; the rating is general and does not include separate ratings of specific work factors or work behaviors.

d. Frequency of Observation - Frequent observation is required due to checkpoints in the system.

7. Reporting

a. Forms - Standardized forms are included for interest ratings, performance rating, a picture interest test, and a summary sheet.

b. Final Report Format - A narrative report with attached forms is recommended.

8. Utility

   a. Vocational Exploration - An extensive amount of occupational information is provided to the client; each work sample contains an introduction to some jobs related to the work sample.

   b. Vocational Recommendations - The system is roughly related to the DOT through Occupational Group Arrangements; the major emphasis is on orientation to job training.

   c. Counselor Utilization - The final report is aimed for the counselor.

9. Training in the System

   a. Training Required - No

   b. Training Available - Yes

   c. Duration - Two weeks

   d. Follow-up - None

10. Technical Considerations

   a. Norm Base - Some work samples were normed on "more than 100 individuals"; inadequate information given on norm group. No industrial norms are available.

   b. Reliability - No data available

   c. Validity - No data available

11. Reviewer's Summary and Comments - The Singer system presently consists of 20 work samples that provide the opportunity to evaluate a client for many job areas - mostly in the skilled trades. The use of interest measures and occupational information makes the client aware of a wide variety of jobs. These career exploration and occupation information functions are the strong points of the system; often at the expense of the evaluation of client potential. Many procedures for using the system are not clarified in the manual and the system is not as integrated into a functional whole.

12. Address

   Singer Education Division
   Career Systems
   80 Commerce Drive
   Rochester, New York 14623

13. Cost - $22,935 for 20 work samples, evaluation package, installation and orientation; Singer usually will not sell less than ten work samples initially, estimated cost for ten is $13,000. Training not included.

14. References

American Vocational Association. Manpower, human assessment and the disadvantaged: A consumer report on the use and misuse of standardized testing. American Vocational Journal, 1973, 48 (1), 85-100.

Backer, T. Methods of assessing the disadvantaged in manpower programs: A review and analysis. Los Angeles: Human Interaction Research Institute, 1972.

Brandt, W. Singer/Graflex Vocational Evaluation System. Informational Bulletin, Institute for Vocational Rehabilitation, Stout State University, 1971, 3 (4).

Developing the job potential of welfare recipients. Manpower, January, 1973, 29-32.

Gannaway, T., & Caldwell, T., The Singer/Graflex Vocational Evaluation System. In A. Sax (Ed.), Innovations in Vocational Evaluation and Work Adjustment. Vocational Evaluation and Work Adjustment Bulletin, 1971, 4 (3), 41-42.

McHugh, P., New approaches in work sample utilization. New York: The Experimental Manpower Laboratory at Mobilization for Youth, 1971.

Morley, R. (Ed.), Vocational assessment systems. Des Moines: State of Iowa, Department of Public Instruction, 1973.

Nadolsky, J., Vocational evaluation and the technological bind. Vocational Evaluation and Work Adjustment Bulletin, 1973, 6 (1), 25-32.

Patten, D., A reaction to industry produced evaluation systems. Vocational Evaluation and Work Adjustment Bulletin, 1973, 6 (2), 33-35.

TALENT ASSESSMENT PROGRAMS

(TAP)

1. Development

   a. Sponsor - Talent Assessment Programs

   b. Target Group - Not specified

   c. Basis of System - Occupational clusters of related jobs

2. Organization

   a. Name and Number of Work Samples - Eleven tests are included in the system:

      (1) Structural and Mechanical Visualization; (2) Discrimination by Size and Shape; (3) Discrimination by Color; (4) Tactile Discrimination; (5) Fine Discrimination without Tools; (6) Gross Dexterity without Tools; (7) Fine Dexterity with Tools; (8) Gross Dexterity with Tools; (9) Circuital Visualization; (10) Retention of Structural and Mechanical Detail; and (11) Structural and Mechanical Visualization in Greater Depth.

   b. Grouping of Work Samples - Each work sample is independent.

   c. Packaging of Work Samples - All work samples are packaged individually.

   d. Manual - A spiral-bound offset manual with illustrations contains some system details (e.g., manual does not specify materials for each task and client administration instructions are presented only in outline form).

3. Work Evaluation Process

   a. Preliminary Screening - Not specified

   b. Sequence of Work Sample Administration - Work sample no. 1 must be given first and work samples nos. 10 and 11 last; the other tasks may be given in any order.

   c. Client Involvement - The type and degree of client involvement during administration is not specified. Because of the shortness and formal nature of the tests, there is probably little client involvement. The client is given a copy of his scoring profile upon completion.

   d. Evaluation Setting - Not specified

   e. Time to Complete the Entire Battery - The tests can be administered in from two to two and one-half hours.

4. Administration

a. Procedures - The materials, tools, layout, as well as the exact client instructions and demonstrations are not specified in detail. The last work sample is administered only to clients who have performed extremely well on work samples nos. 1 and 10; the developer estimates that only 10% of all clients should take the final work sample.

b. Method of Instruction Giving - All instructions are given orally with appropriate demonstrations; no reading is required.

c. Repeating Work Samples - Not specified

d. Providing Assistance to the Client - The evaluator is to make sure that the client fully understands the task before timing begins.

5. Scoring and Norms

a. Timing - The evaluator times the client using a digital, decimal minute timer.

b. Timing Interval - Timing begins when the client fully understands the instructions and stops when the task is completed.

c. Time Norms - The actual completion time to the nearest tenth of a minute is recorded. After any "penalty" scores have been added to the completion time, the total raw time score is compared to percentile norms.

d. Error Scoring - Errors are not clearly defined in the manual. Apparently the entire task is checked for errors. Four work samples are not scored for errors.

e. Scoring Aids - No scoring aids are used.

f. Quality Norms - There are no separate quality norms. In those work samples which are scored for errors, the number of errors is multiplied by a constant number and the resulting "penalty" is added to the raw time score.

g. Emphasis in Scoring - Emphasis is on time scores.

6. Observation of Clients

a. Work Performance - A few work performance factors are mentioned but none are defined; no information is given for their observation.

b. Work Behaviors - A few work behaviors are mentioned but none are defined; no information is given for their observation.

c. Rating System - No method of rating behaviors is used.

d. Frequency of Observation - Not specified

7. Reporting

   a. Forms - A raw score form, a form for recording job possibilities by Occupational Clusters, and a profile sheet are used.

   b. Final Report Format - The profile sheet contains a profile of the percentile scores for each work sample, except no. 11, a Talent Quotient (based on the total results) and a space for a narrative report that interprets the profile and gives vocational recommendations.

8. Utility

   a. Vocational Exploration - Because the work samples are really standardized perceptual and dexterity tests, they are too abstract to provide much direct vocational information to the client, without interpretation by the evaluator.

   b. Vocational Recommendations - Using occupational clusters the manual lists specific job titles with DOT codes within each cluster together with the work samples that relate to specific job requirements.

   c. Counselor Utilization - The profile sheet with its occupational recommendations is designed for the counselor, teacher, or employer.

9. Training in the System

   a. Training Required - Yes

   b. Training Available - Yes

   c. Duration - About a day and a half

   d. Follow-up - Not specified

10. Technical Considerations

   a. Norm Base - Norms are available for: (1) male senior high school students; (2) female senior high school students; (3) male junior high school students; (4) female junior high school students; (5) a mixed sex group of mentally retarded adults; (6) unselected employed young adults; and (7) male alcoholics. All groups are of adequate size, but some details of group characteristics are not given.

   b. Reliability - The developers report a coefficient of stability of over .85 in preliminary test-retest studies over a six month period; however, not enough of the procedures are given to fully judge the meaning of these results.

   c. Validity - No data available.

11. Reviewer's Summary and Comments - As opposed to other work evaluation systems which attempt to present a complete picture of the client, the TAP can be characterized as a battery of perceptual and dexterity tests designed to measure gross and fine finger and manual dexterity; visual and tactile discrimination; and retention of details. Thus, it is limited to the assessment of these fairly specific factors. The developer does not claim that this system will assess all vocationally significant capacities and behaviors; in fact the manual states that other assessment devices should be used in addition to the TAP to obtain a complete evaluation of the client.

12. Address

Talent Assessment Programs
7015 Colby Avenue
Des Moines, Iowa 50311

13. Cost - $2,400 to $2,900 depending upon distance from Des Moines; price includes on-site staff training.

14. References

Morley, R. (Ed.), Vocational assessment systems. Des Moines: State of Iowa, Department of Public Instruction, 1973.

Zikmund, D., & Reinders, L., Talent Assessment Program Test Battery. (sic) In A. Sax (Ed.), Innovations in Vocational Evaluation and Work Adjustment. Vocational Evaluation and Work Adjustment Bulletin, 1974, 7 (4), 58-61.

THE TOWER SYSTEM

(TOWER)

1. Development

   a. Sponsor - Vocational Rehabilitation Administration

   b. Target Group - Designed for the physically and emotionally disabled.

   c. Basis of System - Job Analysis

2. Organization

   a. Name and Number of Work Samples - The system contains 93 work samples arranged into 14 job training areas:

      (1) Clerical - Business Arithmetic; Filing; Typing; One-Hand Typing; Payroll Computation; Use of Sales Book; Record Keeping; and Correct Use of English.
      (2) Drafting - T Square; Triangle; Compass; Working Drawing; Drawing to Scale; and Geometric Shapes.
      (3) Drawing - Perspective; Forms, Shapes and Objects; Shading, Tone and Texture; Color; and Free Hand Sketching.
      (4) Electronics Assembly - Color Perception and Sorting; Running a Ten Wire Cable; Inspecting a Ten Wire Cable; Lacing a Cable; and Soldering Wires.
      (5) Jewelry Manufacturing - Use of Saw; Use of Needle Files; Electric Drill Press; Piercing and Filing Metals; Use of Pliers; Use of Torch in Soldering; and Making Earring and Broach Pin.
      (6) Leathergoods - Use of Rulers; Use of Knife; Use of Dividers; Use of Paste and Brush; Use of Scissors and Bond Folder in Pasting; Constructing Picture Frame; and Production Task.
      (7) Machine Shop - Reading and Transcribing Measurements; Blueprint Reading; Measuring with a Rule; Drawing to Measurement; Metal Layout and Use of Basic Tools; Drill Press Operation; Fractions and Decimals; Measuring with the Micrometer Caliper; and Mechanical Understanding.
      (8) Lettering - Lettering Aptitude; Alphabet and Use of T Square; Use of Pen and Ink; Use of Lettering Brush; and Brush Lettering.
      (9) Mail Clerk - Opening Mail; Date-Stamping Mail; Sorting Mail; Delivering Mail; Collecting Mail; Folding and Inserting; Sealing Mail; Mail Classification; Use of Scale; and Postage Calculation.
      (10) Optical Mechanics - Use of Metric Ruler; Use of Calipers; Lens Recognition; Lens Centering and Marking; Use of Lens Protractor; and Hand Beveling and Edging.
      (11) Pantograph Engraving - Introduction to the Engravograph; Setting-Up, Centering Copy and Determining Specified Ratios; Use of Workholder and Adjustment of Cutter; and Setting-Up and Running Off a Simple Job.

(12) Sewing Machine Operating - Sewing Machine Control; Use of Knee Lift and Needle Pivoting; Tacking and Sewing Curved Lines; Upper Threading; Winding and Inserting Bobbin; Sewing and Cutting; and Top Stitching.
(13) Welding - Measuring; Making a Working Drawing; Identifying Welding Rods; Use of Acetylene Torch; Use of Rods and Electrodes; Use of Torch and Rod; Measuring and Cutting Metal; and Soldering.
(14) Workshop Assembly - Counting; Number and Color Collation; Folding and Banding; Weighing and Sorting; Counting and Packing; Washer Assembly; Inserting, Lacing and Typing; and Art Paper Banding.

b. Grouping of Work Samples - The work samples are grouped into 14 major areas of training.

c. Packaging of Work Samples - The work samples are not individually packaged.

d. Manual - The printed manual is bound in a looseleaf folder. Some system details are not provided, but are covered in a separate book, TOWER.

3. Work Evaluation Process

a. Preliminary Screening - This is emphasized for planning purposes, but the specific information needed prior to administration of the system is not specified.

b. Sequence of Work Sample Administration - Administration is progressive within the major areas; the choice of areas depends upon client interest and/or the evaluation plan.

c. Client Involvement - No client involvement procedures are specified in the manual.

d. Evaluation Setting - A realistic work atmosphere and setting are stressed.

e. Time to Complete the Entire System - The average client completes the entire system in three weeks; however, clients seldom take all work samples in the system.

4. Administration

a. Procedures - The purpose and procedures are clearly described. All tools and materials required are listed; however, some layout details are not given.

b. Method of Instruction Giving - The system uses mainly written instructions which are supplemented by evaluator explanation and demonstration when needed.

c. Repeating Work Samples - The readministration of work samples is encouraged for the purpose of upgrading client performance.

d. Providing Assistance to the Client - The evaluator is encouraged to ensure the client knows how to perform the task before he begins to work; procedures for assisting the client after he has started the task are not specified.

5. Scoring and Norms

a. Timing - The evaluator times the client, but no procedure for timing is established.

b. Timing Interval - Timing begins following instruction and stops upon completion of the task.

c. Time Norms - Time results are rated on a five-point scale, based upon the number of minutes to completion.

d. Error Scoring - All items are checked against carefully defined scoring criteria.

e. Scoring Aids - Extensive use is made of transparent overlays and other scoring aids.

f. Quality Norms - All work samples are rated on a five-point scale, based upon the number of errors.

g. Emphasis in Scoring - Time and the quality of the finished product are given equal weight.

6. Observation of Clients

a. Work Performance - Few work factors are specified and none are specified for individual work samples.

b. Work Behaviors - Work behaviors are not specifically defined.

c. Rating System - A five-point system is used to rate "work and personal characteristics"; the points on the scale are not clearly defined.

d. Frequency of Observation - Frequent observations are not emphasized, but are taken for granted.

7. Reporting

a. Forms - Standardized forms are used for attendance and punctuality; for a summary of time and quality results for each work sample; and for a "vocational evaluation report."

b. Final Report Format - The final report contains a narrative summary using a standardized outline and a section containing mainly global ratings of the client. Personal contact with the counselor is recommended.

8. Utility

a. Vocational Exploration - The client is exposed to many different training areas which are representative of a variety of jobs. The manual contains specific occupational information that is given during the administration of the work samples.

b. Vocational Recommendations - Vocational recommendations are limited to jobs which are directly related to the work samples. The recommendations are not highly related to the DOT and are primarily training orientated.

c. Counselor Utilization - Counselor involvement in the evaluation process is recommended; the final report is aimed at the counselor.

9. Training in the System

a. Training Required - Yes

b. Training Available - Yes

c. Duration - Three weeks

d. Follow-up - No

10. Technical Considerations

a. Norm Base - The system was normed on clients at the Institute for the Crippled and Disabled (ICD); sample sizes or characteristics are not given. Industrial norms are not available.

b. Reliability - No data available.

c. Validity - A seven city research study produced equivocal results.

11. Reviewer's Summary and Comments - The TOWER System is the oldest complete work evaluation system and over the years has served as a model for the development of many work samples. The TOWER uses a realistic job setting to thoroughly evaluate clients for a rather narrow group of jobs. The facts that the TOWER was based on job analysis and that the system has been used for many years to place and train handicapped people are indications that the system is very useful in evaluating clients for a small group of jobs. The lack of precise definitions for work performance factors and client behaviors and the lack of adequate norms are the major weaknesses of the system. The high use of written instructions and the high level of the areas evaluated restricts its use with low literate and mentally retarded clients.

12. Address

ICD Rehabilitation and Research Center
340 East 24th Street
New York, New York 10010

13. Cost - $300.00 for three copies of all work samples and forms; training tuition is $150.00, which includes manual. Note: No hardware is sold by ICD, each facility constructs the work samples. ICD estimates cost to set up unit at about $5,000.00.

14. References

Backer, T., Methods of assessing the disadvantaged in manpower programs: A review and analysis. Los Angeles: Human Interaction Research Institute, 1972.

Board of Education of Baltimore County, Mobile unit to provide vocational evaluation for handicapped children. Towson, Maryland: Author, 1973.

Burrows, J., The state and private agency view of the role of the pre-vocational unit in the community. In New York University, School of Education, Proceedings of the Conference on Pre-Vocational Evaluation Units and Their Use by State Vocational Rehabilitation Agencies in Region II. New York: Author, 1961.

Gorthy, W., et al., Vocational evaluation by work sample technic and its dependence upon medical contributions. Archives of Physical Medicine and Rehabilitation, 1959, 40, 238-242.

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VALPAR COMPONENT WORK SAMPLE SERIES

(VALPAR)

1. Development

   a. Sponsor - Valpar Corporation

   b. Target Group - Industrially Injured Workers

   c. Basis of System - Trait-and-factor approach based on task analysis.

2. Organization

   a. Number of Work Samples - At present the following 12 work samples are contained in the system:

      (1) Small Tools (Mechanical); (2) Size Discrimination; (3) Numerical Sorting; (4) Upper Extremity Range of Motion; (5) Clerical Comprehension and Aptitude; (6) Independent Problem Solving; (7) Multi-Level Sorting; (8) Simulated Assembly; (9) Whole Body Range of Motion; (10) Tri-Level Measurement; (11) Eye-Hand-Foot Coordination; and (12) Soldering.

   b. Grouping - The work samples were developed and are intended for use as individual components and are not grouped as an evaluation system.

   c. Packaging of Work Samples - Each work sample is self-contained. Most are packaged in lockable cases.

   d. Manual - Separate spiral bound, offset manuals are provided for each work sample. Each manual contains all details necessary for that particular component.

3. Work Evaluation Process

   a. Preliminary Screening - Not required

   b. Sequence of Work Sample Administration - The order and number of work samples administered is left up to the discretion of the evaluator.

   c. Client Involvement - Because work sample administration resembles a formal testing situation, client involvement is minimal; feedback on performance is left up to the discretion of the facility and individual evaluator.

   d. Evaluation Setting - Not specified

   e. Time to Complete Entire System - Not specified; note that this is a group of components not a system. (Reviewer estimates 12-15 hours for all 12 units.)

4. Administration

a. Procedures - The material required, instructions to evaluator, and layout are clearly described in the manual; detailed drawings are used to insure understanding.

b. Method of Instruction Giving - All instructions are oral and demonstration; reading is not required except when necessary to perform the given task.

c. Repeating Work Samples - Readministration is encouraged for upgrading, if desired by the evaluator.

d. Providing Assistance to Client - The evaluator is encouraged to insure the client has a thorough understanding of the task before beginning. Practice trials are given as part of the instructions on every work sample, and a clear understanding should exist before starting on the task. The manuals do not specify assistance to the client after timing has started.

5. Scoring and Norms

a. Timing - Evaluator times client.

b. Timing Interval - From the end of instructions to completion of the task.

c. Time Norms - Completion time in seconds is recorded for each portion of all tasks and for disassembly. The total time is converted to percentile norms.

d. Error Scoring - Errors are well defined; the number of errors is recorded for each part of the sample and totaled. Total errors are converted to a percentile score.

e. Scoring Aids - Some use is made of scoring aids.

f. Quality Norms - No separate quality norms are used. Time and error scores are combined to obtain a total performance score.

g. Emphasis in Scoring - Emphasis is divided equally between quality and quantity.

6. Observation of Clients

a. Work Performance - No work factors are specified in detail for individual work samples.

b. Work Behaviors - The same 17 defined worker characteristics are used for all the work samples. Many of these seem to require subjective judgment on the part of the evaluator. Evaluators are encouraged to use only those characteristics which apply.

c. Rating System - The evaluator uses a 5-point scale to rate clients on each of the 17 worker characteristics.

d. Frequency of Observation - Frequency of observation is not specified; however, frequent evaluator contact is required on many work samples due to the administration and scoring procedure.

7. Reporting

   a. Forms - Standard forms are used for scoring and rating of worker characteristics. Body position charts are included with the Upper Body Range of Motion and Whole Body Range of Motion work samples for recording pain and fatigue areas.

   b. Final Report Format - Because this is not an evaluation system, but a group of independent work samples no final report form is used.

8. Utility

   a. Vocational Exploration - There is limited opportunity for vocational exploration due to the abstract nature of the work samples.

   b. Vocational Recommendations - Because these are individual components and not a system evaluation, vocational recommendations cannot be made on the basis of one work sample. The manual indicates areas for further vocational exploration.

   c. Counselor Utilization - Because the system uses the purchasing facility's report format, counselor utilization cannot be specified.

9. Training in the System

   a. Training Required - No

   b. Training Available - Yes

   c. Duration - Consultation and training up to 10 days depending on the needs of the evaluator.

10. Technical Considerations

   a. Norm Base - Norms are available on: (1) clients, (2) sheltered workshop employees, and (3) employed workers. Some sample characteristics are not clearly described.

   b. Reliability - Test-retest reliability coefficients were obtained for most work samples; most reliability estimates are fairly high.

   c. Validity - No data available.

11. Reviewers Summary and Comments - The Valpar Component Work Sample Series currently consists of 12 individual work samples which are physically well designed and constructed. They are appealing to clients and lend themselves to easy administration and scoring. Individual work samples can be easily incorporated into an existing evaluation program. However, because these individual work samples can be purchased as needed by facilities, there are no unified final report forms, and other aspects of an integrated system are lacking.

12. Address

Valpar Corporation
655 N. Alvernon
Suite 108
Tucson, Arizona 85716

13. Cost - $5,060 for the current 12 work samples. Individual samples range from $260 to $600.

14. Reference

Brandon, T. L., Button, W. L., Rastatter, C. J., & Ross, D. R., Valpar Component Work Sample System. In A. Sax (Ed.), Innovations in vocational evaluation and work adjustment. Vocational Evaluation and Work Adjustment Bulletin, 1975, 8 (2), 59-63.

WIDE RANGE EMPLOYMENT SAMPLE TEST

(WREST)

1. Development

   a. Sponsor - Guidance Associates of Delaware, Inc.

   b. Target Group - Not specified; however, the original work samples were developed in a sheltered workshop dealing with the mentally retarded and physically handicapped.

   c. Basis of System - Not specified

2. Organization

   a. Name and Number of Work Samples - The ten work samples are as follows:

      (1) Single, Double Folding, Pasting and Stuffing; (2) Stapling; (3) Bottle Packaging; (4) Rice Measuring; (5) Screw Assembly; (6) Tag Stringing; (7) Scratch Pasting; (8) Collating; (9) Color and Shade Matching; and (10) Pattern Making.

   b. Grouping of Work Samples - Each work sample is independent.

   c. Packaging of Work Samples - The work samples are not individually packaged.

   d. Manual - A spiral-bound printed manual with photographs contains all system details.

3. Work Evaluation Process

   a. Preliminary Screening - Not specified

   b. Sequence of Work Sample Administration - Work samples are administered in order starting with number one and ending with number ten.

   c. Client Involvement - The manual does not contain information on client involvement. Because the WREST resembles a formal testing situation, it is assumed that there is little client involvement.

   d. Evaluation Setting - Not specified

   e. Time to Complete the Entire System - Administration time for individual clients is about one and a half hours; small groups of three to six persons take about two hours.

4. Administration

   a. Procedures - For each work sample, the manual describes the purpose, and gives the materials, scoring information and instructions. A photograph is used to ensure proper layout. The WREST can be administered to small groups of three to six persons. Duplicate sets of the WREST are necessary for group administration.

b. Method of Instruction Giving - All instructions are oral and demonstration; no reading is required.

c. Repeating Work Samples - Readministration of work samples is emphasized for upgrading. Between six and ten retests are recommended for training. Manual does not specify what training is to be used for when completed.

d. Providing Assistance to Client - The evaluator is encouraged to ensure the client knows how to perform the task before he begins to work; procedures for assisting the client after he has started the task are not specified.

5. Scoring and Norms

a. Timing - The evaluator times the client with a stopwatch.

b. Timing Interval - Timing is begun after the client understands the task and usually stops when the work sample is completed. However, when the client reaches the time period corresponding to a scaled score of zero for a particular work sample, the task may be discontinued.

c. Time Norms - The number of minutes and seconds to complete the work sample are recorded; these are compared to scale scores ranging from 0 through 19.

d. Error Scoring - All completed parts are checked against the clearly defined scoring criteria given in the manual.

e. Scoring Aids - No use is made of scoring aids.

f. Quality Norms - The errors for all ten work samples are added together and the total compared to a norms table.

g. Emphasis in Scoring - The time results are emphasized.

6. Observation of Clients

a. Work Performance - Neither specific work performance factors nor their observation are mentioned in the manual.

b. Work Behaviors - No specific work behaviors are defined and no information is given for their observation.

c. Rating System - No method of rating behaviors is used.

d. Frequency of Observation - Not specified

7. Reporting

a. Forms - A "Summary of Results Form" is used to record performance and general remarks.

b. Final Report Format - Not specified; manual makes no reference to a final report.

8. Utility

   a. Vocational Exploration - The very simple nature of most of the work samples makes the WREST of little use in job exploration.

   b. Vocational Recommendations - Not specified

   c. Counselor Utilization - Not specified

9. Training in the System

   a. Training Required - No

   b. Training Available - No

   c. Duration - Not applicable

   d. Follow-up - No

10. Technical Considerations

   a. Norm Base - Male and female norms are available for a number of different age groups. The manual does not give the source of these groups and it is not known if they are clients, workers, or from the general population. Norms are also available on a small sample of employed workers.

   b. Reliability - Some reliability estimates are presented. Test-retest reliabilities are very high. Also given are estimates of internal consistency; the methodology used to obtain these estimates is very much open to question.

   c. Validity - No data available

11. Reviewer's Summary and Comments - The WREST consists of ten, short, low-level tasks apparently designed to assess mainly the manipulation and dexterity abilities of the client. Although it is not stated in the manual, the WREST seems most useful in assessing new clients for assignment to suitable work projects within a sheltered workshop. The emphasis upon repeating the work samples many times should provide an evaluation of the client's ability to improve his performance under repeated practice conditions. The major problems of the system center around the lack of systematic behavior observations, failure to relate results to the competitive job market, and the apparent lack of a useable final report for the referring counselor or agency.

12. Address

   Guidance Associates of Delaware, Inc.
   1526 Gilpin Avenue
   Wilmington, Delaware 19806

13. Cost - $595.00 for work samples and 25 record forms; manual is $14.60.

14. References

Botterbusch, K., Wide Range Employment Sample Test. In A. Sax (Ed.), Innovations in Vocational Evaluation and Work Adjustment. Vocational Evaluation and Work Adjustment Bulletin, 1973, 6 (2), 40-43.

Morley, R. (Ed.), Vocational assessment systems. Des Moines: State of Iowa, Department of Public Instruction, 1973.

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